

## FIRST RECORD OF *GYNAIKOTHRIPS UZELI* (ZIMMERMANN) (THYSANOPTERA: PHLAEOTHRIPIDAE) FROM AUSTRALIA

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### Abstract

*Gynaikothrips uzeli* (Zimmermann) is newly recorded from Queensland, Australia, causing leaf galls on ornamental figs. *Gynaikothrips uzeli* is considered a pest of *Ficus benjamina* (Moraceae) (Weeping fig) in southern Asia and America.

### Introduction

Late in 2011, thrips specimens galling leaves of an unidentified ornamental fig near Cape York in northern Queensland were collected by Plant Biosecurity Queensland staff and sent to the author for identification. They were identified as *Gynaikothrips uzeli* (Zimmermann), a thrips not previously recorded from Australia (Fig. 1). These specimens have been lodged in the QDPC Insect Collection, Ecosciences Precinct, Brisbane, Queensland.

*Gynaikothrips uzeli* is native to Southern Asia and has been recorded from China, Hong Kong, Taiwan, India, Maldives, Singapore, USA, Mexico, Trinidad and Tobago, Costa Rica and Brazil (Anathakrishnan 1978, Mound *et al.* 1995, Mound and Marullo 1996, Held *et al.* 2005, Tree and Walter 2009, Cambero *et al.* 2010, Brito *et al.* 2012, D.J. Tree pers. obs. 2007, 2012). Leaf galls are induced by adults and larvae, which feed only on young leaves of *Ficus benjamina* – one of two common ornamental figs grown widely across Australia (Fig. 2), causing leaves to fold and/or curl (Fig. 3). The other common ornamental fig tree in Australia is *Ficus microcarpa*.

### Discussion

The genus *Gynaikothrips* contains 41 species worldwide (Mound 2012). Prior to late 2011, only three *Gynaikothrips* species were recorded from Australia: *G. ficorum* (Marchal) - known as the primary leaf galler of *Ficus microcarpa*; *G. australis* Bagnall - the primary leaf galler of *Ficus macrophylla*, *Ficus obliqua* and *Ficus rubiginosa*; while *G. additamentus* (Karny) shares the leaf galls of *G. australis* (Mound and Minaei 2007, Tree and Walter 2009).

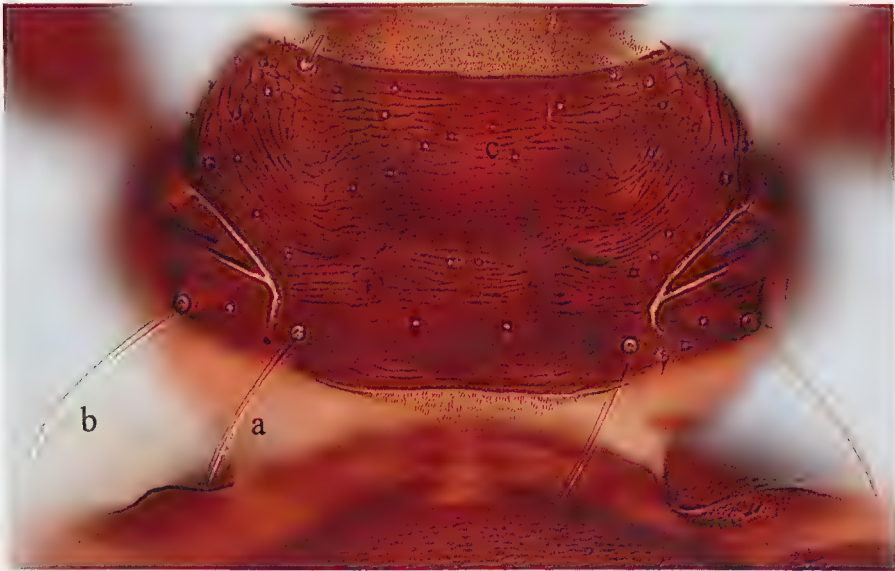
*Gynaikothrips uzeli* is closely related to *G. ficorum*. Mound *et al.* (1995) noted that the differences between the two species were the length of the posteroangular setae and the species of *Ficus* that host their galls. Female *G. uzeli* usually have the pronotal posteroangular setae 0.7 times as long as the epimeral setae and always longer than the pronotal discal setae (Fig. 4). In contrast, female *G. ficorum* have the pronotal posteroangular setae no more than 0.5 times as long as the epimeral setae and usually no longer than the pronotal discal setae. The length of the pronotal posteroangular setae in males of *G. uzeli* and *G. ficorum* is too variable to use as a character state to differentiate between the two species.



**Figs 1-3.** *Gynaikothrips uzeli*. (1) adult female; (2) eggs and feeding life stages, larvae and adults, inside a leaf gall; (3) leaf galls on *Ficus benjamina* in Brisbane, Qld.

Despite the indicated differences between the females, variation in the length of the pronotal posteroangular setae of *G. uzeli* and *G. ficorum* can cause confusion in their identification (Mound *et al.* 2005, Mound and Marullo 1996, Goldarazena *et al.* 2008). Mound and Marullo (1996) suggested that *G. ficorum* could possibly be a 'single, highly selected strain of *G. uzeli* which has been spread around the world by the horticultural trade'. *Gynaikothrips*

*uzeli* males have the pore plate on sternite VIII as a round central spot, whereas *G. ficorum* pore plates can be either the same as *G. uzeli* or a wide band across sternite VIII that continues around onto the lateral margins of tergite VIII as two round spots. However, these differences do not seem to be consistent, with some *G. uzeli* males having similar pore plates to those of *G. ficorum*. Further studies, such as molecular analysis and field work (including correct identification of hosts), are required to enable a clearer understanding of the relationships among the species of *Gynaikothrips* and, in particular, the relationship between *G. ficorum* and *G. uzeli*.



**Fig. 4.** Pronotum of *Gynaikothrips uzeli*, showing posteroangular setae (a) as long as the epimeral setae (b) and longer than the discal setae (c).

Since late 2011, *G. uzeli* has been recorded from near Cairns, Innisfail and Brisbane, all in Queensland. It is likely to spread further in Australia wherever *Ficus benjamina* grows. Prior to 2011 there are no records of any *Gynaikothrips* species inducing leaf galls on *Ficus benjamina* in Australia.

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